Finally, in the terminal intestine the residues of the digestive operation and the secretion of the Malpighian tubes (a purely urinary secretion) are mixed together.

If this summary is compared with that deduced from all my preceding researches on the Insects in general, which concludes my memoir of 1874, it will be seen that the phenomena of digestion in *P. americana* scarcely depart from the conclusions I then laid down. They complete them, and are a remarkable confirmation of them.

The notice terminates with a detailed reply to the objections of my learned opponent.—*Bull. de l'Acad. Roy. de Belgique*, tome xli. p. 1206.

Singular Ceylonese Frogs.

[We have received the following interesting observations on Dr. Günther's paper "On the Mode of Propagation of some Ceylonese Tree-frogs," which appeared in the 'Annals' for May 1876.—Eds.]

When I began to collect our Ceylon reptiles some years ago, the spawn referred to of a tree-frog seemed so common that I did not then notice it as a curious circumstance. I have had several of these sent to me from the damp trunks of plantain trees, and especially from the perpendicular sides of the stone-quarries at Mutuwal; and about the same time I saw one on the corner of a tank close to the lake near my house in Slave Island. All these masses of spawn were firmly attached to some object, and were several inches from the water. They were several inches in length and from $2\frac{1}{2}$ to 3 inches across the rounded mass at the lower end; and I concluded they were the spawn of the most common tree-frog in Ceylon from the coast up to several thousand feet elevation. In a note from Mr. J. Catto from Illagolla, and dated 1872, he told me he had seen a good deal of this spawn, and offered to send me some of it.

Our Colombo frogs are the following; and this spawn must be the produce of one of them. 1st. The most abundant is the bright green-coloured large frog seen in such quantities on weeds, with their heads out of the water, in the Colombo lake, and not unlike the eatable frog; indeed a Frenchman who could not resist eating these pronounced them very good. It is the *Rana hexadactyla*, and adds to the concert of frogs in the lake at the commencement of each monsoon. 2nd. The *Rana tigrina*, or Ceylon bull-frog, a very large brown-spotted frog, with corrugations along his back, found in holes in damp places along the shores of the lake, rare compared with the above, and croaks so loudly that his voice resembles that of a young bull. 3rd. The *Rana cyanophlyctis*, a smaller one than either of the above, with dark spotted back and white abdomen, found in ponds and smaller bits of water, still more rare than the other two. 4th. The very common house-toad, generally found under flower-pots in Colombo: this is the *Bufo melanostictis*; and I am aware that all these four breed and spawn in the water. 5th. *Diplopelma ornatum*, a beautifully coloured small squat frog, has been brought to me from the vicinity of Colombo. 6th. *Callula pulchra*, a dark-coloured toad-like one, very rarely found near Colombo; but I never saw these, nor heard of their being found in

the vicinity of the masses of spawn referred to by Dr. Günther. I never saw a species of the small *Ixalus* near Colombo, and, indeed, never at a lower elevation than the forests of the interior; it cannot, therefore, be spawn of one of these, as suggested by Dr. Günther. 7th. The most common tree-frog in Ceylon, the *Polypedates maculatus*, is also not uncommon in Colombo, where the natives have a dread of it, as they believe that if it leaps on children they become consumptive and attenuated like these tree-frogs. These frogs are often found attached to the backs of doors, and leap upon the bodies of people who attempt to open and shut the doors. I feel pretty certain that the masses of spawn referred to are the produce of this tree-frog; and I shall thank any one for a fresh specimen of the spawn, or for information as to where it can be seen.

The other tree-frog with the large spawn attached to its abdomen, and which is most correctly figured in the plate accompanying Dr. Günther's paper, was sent to me some years ago by Mr. Perera, then conductor on the Poojagodde estate in the Ramboda district, and from a high elevation. I considered this frog to be identical with one described lately by Dr. Günther as *Polypedates nanus*; and in a small bottle full of these frogs in my possession I see some large grains of spawn identical with those sent by me to Dr. Günther. I know the *Polypedates reticulatus* as a very distinct one sent to me some years ago by Mr. J. Catto from Illagolla; but of course there can be no disputing Dr. Günther's authority as to the proper names of frogs first described by himself. Respecting the frogs which I supposed to be *P. reticulatus*, Mr. J. Catto wrote to me on the 7th of October, 1872:—"These frogs do not go into the water, but sit upon wet stones or on damp walls, and on the edges of bath-tubs, and jump upon you when you go near and disturb them, squirting a disagreeable liquid at the same time. Nasty brutes! I wish I could send you every one about the place."

With reference to Dr. Günther's remark as to whether the specimen with the spawn attached to it was caught in the water or out of it, I am sorry I cannot say; but some correspondent may be fortunate enough to clear up this matter. I need not say how grateful I shall feel for specimens of frogs from all parts of Ceylon. These are best preserved in arrack, as they shrivel up and get hard in strong spirits.

There was a very interesting paper by the Rev. Dr. Boake some years ago on one of our freshwater fishes, which was described as securing its spawn inside its capacious throat when there was any danger to be apprehended. I do not know if this one belongs to the genus of fishes referred to by Dr. Günther.

Colombo, 11th July, 1876. W. Ferguson, F.L.S.

Remarks on Fossils from the Ashley Phosphate-Beds.

Prof. Leidy observed that the so-called phosphate-beds of Ashley river, South Carolina, were remarkable for the singular admixture of multitudes of fossils of different ages, from the early Tertiary period inclusive down to the present epoch. The phosphatic nodules,